

Applicants : Nancy Carrasco, Ge Dai and Orlie Levy
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Amendments to the Claims:

Please cancel claims 76-86 without disclaimer or prejudice to applicants' right to pursue the subject matter of these claims in a future continuation or divisional application.

Please amend claims 56 and 63, and add new claims 87-89 as set forth below.

1-55. (Canceled)

56. (Currently Amended) A method of determining whether a mammalian sodium/iodide symporter is expressed in a mammalian tissue, the method comprising contacting nucleic acid from the mammalian tissue with a ~~nucleic acid~~ probe and detecting whether the probe hybridizes to the nucleic acid, wherein detecting hybridization of the ~~nucleic acid~~ probe to the nucleic acid ~~nucleotide sequence~~ indicates that the mammalian sodium/iodide symporter is expressed in the mammalian tissue, ~~and wherein the nucleic acid probe comprises: (i) the nucleic acid sequence corresponding to the coding region comprises nucleotides set forth in SEQ ID NO:1 or its complement; (ii) a nucleic acid sequence that hybridizes to the nucleic acid sequence corresponding to the coding region set forth in SEQ ID NO:1 or its complement to permit detection of a mammalian sodium/iodide symporter expressed in a mammalian tissue by hybridization; or (iii) a nucleic acid sequence that hybridizes to a portion of the nucleic acid sequence corresponding to the coding region set forth in SEQ ID NO: 1 or its complement to permit detection of a mammalian sodium/iodide symporter expressed in a mammalian tissue by hybridization ~~or wherein the nucleic acid probe detects nucleotides set forth in SEQ ID NO:1.~~~~

57. (Previously presented) The method of claim 56, wherein the nucleic acid from

the mammalian tissue is mRNA.

58. (Previously presented) The method of claim 56, wherein the nucleic acid from the mammalian tissue is mRNA made into cDNA.

59. (Previously presented) The method of claim 56, wherein the mammalian tissue is non-thyroid tissue.

60. (Previously presented) The method of claim 56, wherein the nucleic acid probe further comprises a label.

61. (Previously presented) The method of claim 60, wherein the label is selected from the group consisting of a radioactive label, biotin, and a fluorescent probe.

62. (Previously presented) The method of claim 56, wherein the tissue is a human tissue.

63. (Currently Amended) A method for determining whether a mammalian sodium/iodide symporter is present in a sample, the method comprising contacting the sample with an antibody that is immunoreactive with the mammalian sodium/iodide symporter, wherein detecting binding of the antibody to the mammalian sodium/iodide symporter indicates that the mammalian sodium/iodide symporter is present in the sample, and wherein the antibody is immunoreactive with a protein having the amino acid sequence set forth in SEQ ID NO:2 ~~and/or with a protein comprising twelve transmembrane domains and amino acid residues Asp 16, Glu 79 and Arg 208.~~

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64. (Previously presented) The method of claim 63, wherein the antibody is a polyclonal antibody.

65. (Previously presented) The method of claim 63, wherein the antibody is a monoclonal antibody.

66. (Previously presented) The method of claim 63, wherein the antibody is labeled.

67. (Previously presented) The method of claim 63, wherein the sample is a mammalian tissue.

68. (Previously presented) The method of claim 67, wherein the mammalian tissue is thyroid tissue.

69. (Previously presented) The method of claim 67, wherein the mammalian tissue is non-thyroid tissue.

70. (Previously presented) The method of claim 67, wherein the mammalian tissue is human tissue.

71-86. (Canceled)

87. (New) The method of claim 56, wherein the probe comprises the nucleic acid sequence corresponding to the coding region set forth in SEQ ID NO:1 or its complement.

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88. (New) The method of claim 56, wherein the probe comprises a nucleic acid sequence that hybridizes to the nucleic acid sequence corresponding to the coding region set forth in SEQ ID NO:1 or its complement to permit detection of a mammalian sodium/iodide symporter expressed in a mammalian tissue by hybridization.

89. (New) The method of claim 56, wherein the probe comprises a nucleic acid sequence that hybridizes to a portion of the nucleic acid sequence corresponding to the coding region set forth in SEQ ID NO: 1 or its complement to permit detection of a mammalian sodium/iodide symporter expressed in a mammalian tissue by hybridization.